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ABSTRACT

The study examined barriers to education perceived by a sample of 119 students aged 25 and over attending small private liberal arts colleges in Arkansas, Mississippi, and Tennessee. Among findings were that the number of children a respondent had impacted his or her perception of situational and dispositional barriers; the employment status of the respondent had an effect upon perception of institutional barriers; and race of the respondent had an effect upon perception of situational barriers. The six most frequently reported barriers were: (1) not enough time; (2) amount of time required to complete the program; (3) cost; (4) home responsibilities; (5) not enough energy or stamina; and (6) job responsibilities. Recommendations are offered, such as providing credit for students' past experiences, providing information on possible sources of financial aid, establishing more liberal admissions requirements, providing quality low-cost day care services, and scheduling to meet the needs of students employed full-time. Detailed analysis of questionnaire results and the questionnaire itself are appended. Includes 56 references. (DB)

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PERCEPTIONS OF BARRIERS TO UNDERGRADUATE EDUCATION BY NON-TRADITIONAL STUDENTS AT SELECTED NON-PUBLIC, LIBERAL ARTS INSTITUTIONS IN THE MID-SOUTH

A paper submitted to the
Mid-South Educational Research Association
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ABSTRACT

Postsecondary enrollments have risen steadily since the 1950's, but this trend is now beginning to slow. The population segment aged 18-24 is declining and the factors that have worked to keep enrollments high seem to be transitory. Financial problems have been predicted for postsecondary education with those institutions dependent on student-generated revenue to be hardest hit. This means the small, private liberal arts college of the South could very well be headed for financially troubled times.

This problem could possibly be solved by increased enrollments of adult undergraduate students. Because of changing demographics, a changing society, and technological advances, participation rates for adults in postsecondary education are rising. To fully understand the special problems encountered by adult students, more must be known about how the adult functions in postsecondary education.

The purpose of this study was to learn what barriers are experienced by non-traditional students at small, private liberal arts colleges and how the variables of age, sex, marital status, number of children, employment status, income, and race affect the perception of situational, institutional, and dispositional barriers. A sample was drawn from the population of students aged 25 and over attending Carnegie classification Liberal Arts II institutions in Arkansas, Mississippi, and Tennessee.

The results of this study indicated that some variables seem to affect perception of barriers in some barrier categories. It was found that the number of children reported by the respondent had an effect upon their perception of situational barriers and dispositional barriers, the employment status of the respondent had an effect upon their perception of institutional barriers, and that the race of the respondent had an effect upon their perception of situational barriers.

Introduction to the Problem

Since the 1950's, postsecondary enrollments have been increasing, but the rate of increase is now slowing (Snyder, 1987). The segment of our population aged 18-24 is declining (Kaufman, N., 1986) and factors which have worked to keep enrollments high seem to be transitory (Kaufman, P., 1986). This could mean trouble for all postsecondary institutions since most revenue is directly tied to student enrollment. Those relying heaviest on student-generated revenue would however, be hardest hit (O'Neill, 1973). This is predicted to mean trouble for independent higher education (Scarlett, 1986), especially the small, private liberal arts colleges of the South (Leckie & Sallis, 1984).

Due to changing demographics, a changing society, and technological advances, participation rates for adults in postsecondary education are rising and indications are that this will continue (Cross, 1986). These students come with special problems that can make their participation in educational activities difficult. More must be known about who these students are, what their goals are, and what barriers exist in order to plan policies, procedures, and programs to meet their needs (Hughes, 1983).

The Changing Environment

An examination of recent data indicates that the traditional applicant pool of people aged 18 to 24 is shrinking (Kaufman, P., 1986). The mean age of the population is increasing due in part to a declining birthrate. The rate of growth in this country from 1987 to 1995 is predicted to be 0.81 percent per year. This is less than any period in history except during the Great Depression of the 1930's when it was only 0.70 percent. After 1995, the growth rate may be lower than this, -0.09 percent per year (Bureau of the Census, 1988).

Predictions are that the population segment from which the traditional student is drawn has reached an all time high and will now decrease in numbers proportionate to the decreasing birthrate. This decreasing number of potential traditional aged students might lead one to beleive that all postsecondary enrollments will fall. There are however, other factors which could affect enrollments.

Society also is changing. Because of women's evolving home and family roles and increasing economic pressures, greater numbers are entering or re-entering the workforce. This often requires training to gain marketable job skills. Shorter working hours have allowed workers more free time, thus increasing the demand for leisure-learning to make more productive use of leisure hours. It is increasingly common for people to change jobs several times in their worklife. Often these career changes require training for new or

different skills. Many people will turn to the educational system as the means for acquiring skills to lead more productive, satisfying lives (Cross, 1986).

This country is experiencing a rising educational level. It has been said that learning is addictive; the more we have, the more we want (Cross, 1980). This has been to some extent evidenced by a rising educational level in this country. The percentage of people completing high school increased approximately 60% from 1910 until 1985. Those completing college increased by nearly 17%. The median years of school completed rose from 8.1 to 12.6 during this 75 year span (Snyder, 1987). Education is more often being seen as a factor for the improvement of life. This is true whether it is for better job skills or for quality use of leisure time.

Technology today is changing more rapidly than ever before. Within the span of a lifetime travel has changed from the horse and buggy to the jet airplane, radio and television have been invented, and electricity has become a necessity of daily life. Skills for living and working in our world are rapidly changing. Jobs as well as entire industries come into existence and become obsolete so rapidly that it requires retraining of workers to keep them in the workplace. Education may well be the key to survival in this changing technological world (Cross, 1986).

A Shift in Postsecondary Clientele

In light of the forgoing discussion, one might ask who will be the future student in postsecondary education. With

a steadily aging population, societal changes occurring, and expanding technology, the typical student of the future may not be the traditional 18- to 24-year-old recent high school graduate. Instead, many of these students are likely to be older, less traditional (Cross, 1986). These non-traditional students will also present a whole new set of problems for postsecondary institutions who want to attract and retain them until graduation (Noel, Levetz, & Saluri, 1985).

These problems experienced by non-traditional students are commonly called "barriers." Barriers arise from the student's own personal life, policies and programs which institutions have geared to younger students, and from internalized feelings toward learning. Research done in the past generally categorized these barriers into three groups. Practical limitations arising from the life of the student are called situational barriers. Problems due to the school environment, especially concerning policies and procedures planned for younger students, are institutional barriers. Feelings toward returning to school which are limiting to a student's success are called dispositional barriers. These three categories of barriers may act individually or together, depending on many variables, to make participation in education difficult, or at worst, impossible (Cross, 1986; Stalford, 1978; Peterson, 1979; Silling, 1984).

This trend toward the older, non-traditional student has already begun. On many campuses, these students already

represent as much as 40% of the student body (Snyder, 1987). It is becoming clear to administrators that this represents a new breed of student who will find it necessary to overcome barriers in all categories to complete their education. More must be known about who these students are, what their goals are, and what barriers exist in order to plan and carry out programs to meet their needs (Hughes, 1983). These new students could very well be the alternate market needed by postsecondary institutions in the face of declining traditional-aged enrollments.

One might also ask which postsecondary institutions will be affected by these trends. All institutions will be affected to some degree since most revenue is directly tied to student enrollment (O'Neill, 1973). If there were a decrease in enrollment, a decrease in revenue would follow. Those institutions that rely heavily on student tuition for revenue would be hardest hit. These are the non-public institutions as opposed to federal- and state-funded public institutions. Predictions have been made that the small, non-public liberal arts college of the South could be the most adversely affected by a decline in enrollment (Leckie & Sallis, 1984).

A review of the literature revealed that there were no studies which looked at the effect of variables upon barrier perception at small, non-public liberal arts colleges. Most research being done in the area of barriers to adult participation have studied adult learning in general

(Johnstone & Rivera, 1965; Carp, Peterson, & Roelfs, 1973) or non-traditional students in larger, public institutions (Sadler, 1982; Eversoll, 1986; Mischler, Frederick, Hogan, & Woody, 1982). Much can be learned from these studies and even applied to the smaller, non-public liberal arts college. To be more applicable to these institutions however, a study of barrier perception by students at the smaller, non-public liberal arts institutions would be beneficial.

Little has been done to directly study what effect such variables as age, sex, marital status, number of children, income, employment status, or race have upon barrier perception. Studies done by Johnstone and Rivera (1965) and Carp, Peterson, and Roelfs (1972) looked at reasons people failed to participate in postsecondary education. This was only a by-product of the overall purpose of these studies. They did however, consider the effect of several variables upon perception of barriers. Most of the collegiate studies look at barriers in general without the emphasis being placed upon the effect of any variables on barrier perception.

PURPOSE OF THE STUDY

The purpose of this study was to learn what barriers are experienced by non-traditional students at small, private liberal arts colleges in the Mid-South area and how the variables of age, sex, marital status, number of children, employment status, income, and race affect the perception of

situational, institutional, and dispositional barriers. A greater understanding of the effect of these variables upon barrier perception would enable administrators to plan more effectively for meeting the needs of this growing segment of their student population.

To learn this, a set of research questions and hypotheses was developed.

The following research questions were asked:

1. What educational barriers are perceived to exist by non-traditional students at Carnegie classification Liberal Arts II institutions?
2. Do factors such as age, sex, marital status, number of children, income, employment status, and race affect non-traditional student perception of categories of barriers to participation at Carnegie classification Liberal Arts II institutions?

The following hypotheses were tested at the 0.05 level of significance:

1. For non-traditional students there are no differences in the perceptions of categories of educational barriers attributable to their age.
2. For non-traditional students there are no differences in in the perceptions of categories of educational barriers based on sex.
3. For non-traditional students there are no differences in the perception of categories of educational barriers based on race.

4. For non-traditional students there are no differences in the perception of categories of educational barriers based on age, sex, or race.
5. For non-traditional students there are no differences in the perception of categories of educational barriers based on marital status.
6. For non-traditional students there are no differences in the perception of categories of educational barriers based on number of children.
7. For non-traditional students there are no differences in the perception of categories of educational barriers based on income.
8. For non-traditional students there are no differences in the perception of categories of educational barriers based on employment status.

REVIEW OF RELATED LITERATURE

A brief review of the literature is provided as background information for the study. The following topics were researched: adult education, adult postsecondary education, non-traditional students, evening students, part-time students, re-entry students, adult student needs, barriers to adult student participation, adult learning interests, worklife transitions, leisure learning, women's roles, family structure, postsecondary enrollment, private higher education, and higher education funding. This information is presented under the headings of demographic

trends in the United States, enrollment patterns, the crises situation in private higher education, the non-traditional student in undergraduate education, and barriers to non-traditional student participation.

Demographic Trends

In the last 30 years, the population of the United States has grown approximately 60 million. According to projected population estimates, the population of the United States will increase from 244 million in 1987 to 302 million by 2040. This represents a slowing of the growth rate which after the year 2040, will be virtually zero. The actual growth rate for the period 1990 to 1995 is estimated at 0.76 percent per year. After the year 2050, a negative growth rate will be experienced. By the period 2050 to 2080, the estimated annual change will be -0.09 percent per year (Bureau of the Census, 1988).

One of the most important trends in population projections is the overall aging of the population. The median age of the entire United States population in 1987 was 32.1 years. Projections made through 2080 indicate that we may not see a median age so young again. Estimates show an increase from 36.4 at the turn of the century to 43.9 in the year 2080 and that the segment of the population age 25 or over will increase. In 1987, this segment was estimated to be 63% of the population. In the year 2000 and 2080, this segment will represent 67% and 74% respectively (Bureau of the Census, 1988).

The implications of the above trends are already beginning to be felt in adult enrollment of postsecondary education. For the period 1980 to 1985, adult enrollment increased from 3.9 million to 4.7 million. The proportion of postsecondary students in institutions of higher education who were 25 years old or older increased between 1972 and 1985 by 10%. This is an increase from 28% to 38% of the student body (Stern & Chandler, 1987). Estimates place the percentage of non-traditional students on our college campuses in the 40% to 50% range in the early 1990's (Cross, 1981).

As a result of the slowing birthrate, the pool from which the traditional college aged student is drawn is declining. This group was about 27.3 million in 1987, a decline of 3 million from 1980. It is predicted that this group will decline another 3 million by 1995 (Bureau of the Census, 1988). This has caused concern for college administrators that enrollments would decline in the future (Crossland, 1980). This decline has not yet been experienced because while this population segment decreased 6.3% from 1980 to 1985, total college enrollments have actually increased 10%. This is attributable to the fact that the enrollment rate for the 18- to 24-year-olds increased from 25.0% in 1980 to 27.8% in 1985 with increased participation rates by women significantly contributing to this, while enrollment rates for adults have increased as shown previously. While fewer 18- to 24-year-olds existed in the

general population, a larger percentage of them were choosing to enroll in colleges. The factors which have kept traditional-aged enrollments high may be transitory. Adding this to their already declining numbers, a decline of their enrollment is likely (Kaufman, P.,1987).

Societal Trends

While the population ages, it is becoming better educated. The educational attainment level has risen steadily over the last decades. Census Bureau data show that the median number of school years completed for the 25 and over age segment rose from 8.1 in 1910 to 12.6 in 1985. This includes data for those completing four-or-more years of high school and four-or-more years of college. In 1910, the completion rate for four-or-more years of high school was 13.5%; for four-or-more years of college it was 2.7. By 1985, the respective percentages have risen to 73.9% and 19.4%. This indicates a rise of 60.4% in the completion rate for four-or-more years of high school and 16.7% for those completing four-or-more years of college (Snyder, 1987).

In studies to find adult learning interests, results indicate over half are job related. The reasons most people listed are to find a new job, advance in their present job, or to get a better job (Boaz, 1975; Cross, 1986). Aslansian and Brickwell (1980) found that a change in job or career is the most common of life's transitions. This change also is the one most likely to motivate people to seek more education. Factors which could bring about increasing rates

of job or career change may be job obsolescence, increased participation by women in the labor market, lengthening of the worklife span, greater job competition, higher aspiration, social acceptability of career change, and the ability to maintain pension plans despite job change (Cross, 1980).

To the American public, there remains controversy over the value of education, specifically a college degree. However, the majority feel that education is the key to success. Of the 40 million people in job or career transition, 60% report that they will seek further education (Cross, 1986).

Women's roles have changed. In the not-too-distant past, women remained mostly at home and were educated to a lesser degree than men. The majority of their life was spent in performing household chores and raising children. Release from this home-bound role has come about partly as a result of the resolution of the larger social issue of civil rights and the women's movement. Also, tighter economic conditions as well as improved technology for the home and family have brought about changed roles for women (Cross, 1986). These changed roles mean increased participation in the labor market and more free time to devote to self-improvement. Both are prime motivators for increased educational attainment.

Even though education that is job related still dominates, learning for recreation and leisure is a growing

area. Learning for leisure increased by 75% from 1969 to 1975 (Boaz, 1978). The greatest growth for leisure learning has come from the more affluent class who can best afford this luxury. Another fast growing segment interested is that of people aged 65 and older. These people have more time and want to use it more constructively. Reasons other segments of the population engage in leisure learning are decreased work hours both on the job and in family care, increased complexity of leisure activities, and changing attitudes toward the use of leisure time (Cross, 1986).

The rapid changes experienced by technology have far-reaching implications for continued adult learning. An expansion of knowledge in some fields such as engineering and medicine have occurred so fast that it is said that the "half-life" of knowledge for its professionals is only five years. Therefore, in ten years, all knowledge would be obsolete without continuing education (Lindsay, Morrison, & Kelley, 1974).

Not only does the volume of knowledge grow, but its structure has become more complex. Many professionals must work hard just to keep up with their field. Others must learn continually to assure themselves that their job skills are currently marketable (Darkenwald & Merriam, 1982). Occupational and vocational trends indicate that fewer unskilled workers will be needed while workers for more technologically advanced jobs will be needed (Knowles, 1969).

In just one generation, the lives of people have changed drastically due to technology. These wonders of technology have created and wiped out entire industries and occupations in only a few years. The greatest change in the workplace is the shift of workers from producers of materials to producers of information (Cross, 1980). In 1980, about half of the American payroll went for manipulation of symbols rather than production of things (Margarrell, 1980).

Enrollment Patterns

In the 1950s higher education enrollments were projected to increase so fast that is was referred to as a 'tidal wave'. In 1956, the First Interim Report of the President's Committee on Education Beyond the High School predicted that postsecondary enrollments would double or perhaps triple by 1970. This prediction was correct. From 1955 to 1970, the actual enrollments went from 2,678,623 to 7,920,149.

Several factors contributed to this increase. The completion rate for high school increased, and the percentage of these graduates entering postsecondary education also increased. Other factors included employers placing a higher value on advanced education, veterans with G I. benefits, an improved public opinion of college education and the passage of the 'baby boomers' through the traditional college age years (Henry, 1975).

This trend of rising enrollments has continued, and in 1987 there were approximately 12,544,000 students enrolled in

postsecondary education (Stern & Chandler, 1988). When Harold L. Hodgkinson said in his article in Phi Delta Kappan (1986) "demographics is destiny", he was correct. As already shown in the study of demographic trends, there will be fewer 18 year-olds for colleges to enroll, but more adults over the age of 25. What has occurred is that in 1970 the makeup of the enrollment of students under the age of 25 was 72% and those 25 or over was only 28%. In 1985, the under 25 enrollment was down to 58%, while those 25 or over comprised 42% (Snyder, 1987). This group of older students not only kept enrollments from falling, but allowed them to continue to grow. This is exactly what postsecondary administrators should have known would happen. All the evidence pointed to this with the changing demographics, the societal trends, and improving technology. A trend of fewer younger students and more older ones is likely to continue well into the 21st Century (Bureau of the Census, 1984).

The Crises in Independent Higher Education

In 1970, it was predicted that 71% of colleges would be "headed for financial trouble or...in financial difficulty" (Cheit, 1971, p. 139). For independent higher education, trouble was forecast because almost two-thirds of the four-year institutions derive 70% of their unrestricted educational and general revenue from tuition and fees. Since the traditional enrollment pool was known to be dwindling, and the small growth of postsecondary education was not being equally shared by independent higher education, trouble must

lie ahead (Scarlett, 1986). It was predicted that many independent colleges would close in the 1970s and that as many as 200 small, non-public liberal arts institutions would close in the 1980s (Margarrell, 1980). The worst to suffer was predicted to be the small, private liberal arts college of the South (Leckie & Sallis, 1984).

What actually happened was that during the 1970s, 102 independent institutions closed, 33 more merged with other institutions, and 15 became state owned. However, 243 independent institutions became accredited by national accreditation agencies and 44 new independent institutions were founded (Fadil & Carter, 1980). This was a net increase in the number of independent institutions.

Among the reasons for their survival were ingenuity and tenacity. An idea borrowed from business has been the use of marketing techniques for student recruitment. These institutions have possibly more fully come to understand their market. Their smallness is not necessarily a problem. Because they are smaller, it takes less money to operate them. Their margin for error is just smaller (West, 1982).

Despite the fact that many small, independent postsecondary institutions have survived the 1970s and the 1980s, the future may still be troubled. In 1982, the National Institute of Independent Colleges and Universities (NIICU) research study reported that 42% of the Carnegie Liberal Arts II colleges experienced a loss in enrollment of 10% or more. To small independent colleges, the loss of 10%

of its tuition revenue approximates what that institution might spend on its library, academic computing support, academic administration, and curriculum development combined (National Affairs, 1983).

The Non-Traditional Student in Undergraduate Education

Non-traditional students differ from traditional college-aged students. They are older, have multiple commitments, and are highly motivated (Erickson, Kimmel, Murphy, & Newcomer, 1976). The age of 25 seems to be the typical time to be classified as a non-traditional student (Groves & Groves, 1980; Mishler, Fredrick, Hogan, & Moody, 1982; Copland-Wood, 1986). For these students, multiple commitments often mean that not only are they responsible for themselves, but often are married, have children, and work at full-time jobs (Young,1984).

Since returning to college is a very conscious life decision for the adult student, they usually are motivated to give it a lot of hard work. Their purpose is much clearer and their goals are more defined. The two major reasons for returning are either related to career needs or for self-fulfillment (Rawlins, 1979). Goals usually include participation to gain specific skills, for the sake of the activity itself, or learning for its own sake (Hengstler, 1984).

These students tend to be between the ages of 25 and 35. However, the over age 55 group is the fastest growing. The division between the sexes is almost even. Most adult

students are Caucasian. Incomes tend to be above $10,000 for these students. In general, they tend to be the more affuluent people in our society (Richter-Antion, 1986).

Barriers to Non-traditional Student Participation

Many things can become barriers to the participation of the adult in postsecondary education. The literature identifies three main categories of barriers. These can be internal as well as external to the student's life or can be found in the school setting itself. First, the barriers that have to do with the limitations arising from a student's present situation in life, and are therefore external, are called situational barriers. Second, dispositional barriers are the internal, self-imposed psychological barriers. Third, those over which the student has no control, but are due to the environment of the school itself, are known as the institutional barriers (Cross, 1986; Stalford, 1978; Peterson, 1979).

In 1962, a study was done by the National Opinion Research Center under the direction of John W. C. Johnstone and Ramon J. Rivera. This study was concerned with the organizatin of adult education to see how it facilitated or hindered adult learning. One section contained statements which were described as reasons people have for not attending adult education classes. The respondents were asked to indicate if these applied to them. The questions were classified as those beyond the individual's control, or situational barriers, and those based on attitudes toward

education, which are dispositional barriers. The results indicated that age, socio-economic status, and sex were variables affecting barrier perception.

People aged 45 and over identified more total barriers than younger people. These older people also reported more dispositional barriers than did the younger people. Fewer dispositional barriers but more institutional barriers reported by younger people indicate that they had fewer qualms about participation but had more obstacles which stood in their way. Women identified more situational barriers, but were no more likely to identify dispositional barriers. People in the lower socio-economic levels faced both kinds of barriers more frequently than did those in the higher socio-economic levels (Johnstone & Rivera, 1965).

In 1972, Abraham Carp, Richard Peterson, and Pamela Roelfs of Educatinal Testing Service did a study for the Commission on Non-Traditional Study. The purpose of this study was to describe in detail the potential market for adult learning and to analyze the learning activities of adults already engaged in learning.

To gather the information for this study, Response Analysis Corporation (RAC), of Princeton, New Jersey was sub-contracted to administer a questionnaire designed by Educational Testing Service. The universe for this study included the approximately 104 million people living in the continental United States aged 18 to 60 who were not full-time students. To select the geographic location,

households, and individuals for this study, the most recent census information and random selection procedures were used. A total of 2,974 people were asked to fill out the questionnaire. Sixty-seven percent actually filled it out, and of these, 111 were eliminated because it was determined they were full-time students. This produced a total sample of 1,893.

The questionnaire was a self-administering, 34 question, multiple-choice instrument. It asked respondents to indicate their interests in subject matter and learning modes, preferred places of study, time factors in learning, reasons for learning, willingness to pay, guidance needs, and perceived barriers to learning.

Section I, question number 11 dealt with barriers to participation in learning activities. This question contained 24 statements of things that might prevent the respondents from participating in learning activities. Any of these statements that the respondent felt were important were to be circled. Data from this section were analyzed by finding a percentage of responses to each of the 24 items based on age, sex, race, marital status, age and sex, race and sex, geographic region, and type of community in which they lived. This study did not classify barriers into categories, but considered the effect of selected variables and combinations of these variables upon perception of each individual barrier.

To report the results, the barriers were listed in the order of importance:

1. Cost
2. Not enough time
3. Not wanting to attend school full time
4. Home responsibilities
5. Job responsibilities
6. Amount of time required to complete the program

These were all reported by at least 20% of the sample. Other barriers were reported by smaller percentages. Here again, as in the Johnstone and Rivera study, age and sex were shown to affect the results. Socio-economic status was not a category in this study.

In further analysis of the results of this study, it was revealed that twice as many men as women report that job responsibilities are barriers, while almost 10 times more women as men report lack of child care as barriers. Cost is a great barrier for those under age 35. Nearly three-fourths of the young women reported cost, while over one-half the young men also reported cost as a barrier. The youngest respondents more often reported not wanting to return to school full time and those under age 25 reported low grades in the past as barriers. Barriers significant to those in the middle age groups included not enough time and home responsibilities. Feelings of being too old and not having enough energy increased with age especially among women (Carp, Peterson, & Roelf, 1973).

Patricia Cross (1986) grouped these 24 barriers from the Carp, Peterson, and Roelfs study into situational, institutional, and dispositional barriers. She stated that some barriers could be included in more than one category and that categorizing of barriers was somewhat arbitrary. However, she had tried to place the barrier in the category that seemed most direct and straightforward (Cross, 1986). This decision is supported by other authors and researchers in their reference to this list and through their use of the categorized barriers in their work (Charner, 1980; Charner & Fraser, 1986; Cross & McCartan, 1984; Brookfield, 1986; Thiel, 1984).

Although this placement of barriers in categories is not absolute, other authors and researchers have shown agreement by its use in their work (Charner, 1980; Charner & Fraser, 1986; Cross & McCartan, 1984; Brookfield, 1986; Thiel, 1984).

The study by Carp, Peterson, and Roelfs as well as the placement of barriers into categories by Cross provideed the basis for this study. The section of the Carp, Peterson, and Roelfs instrument that studied barriers was modified. Analysis was performed to determine the affect of selected variables upon the perception of barrier categories. The modifications, demographic information, and analysis will be discussed in the methodology section of this paper.

Other studies have been done to determine barriers to adult participation in education in the collegiate setting. The results of these studies show that these barriers

continue to plague adult students there as well. These studies also recognize three distinct types of barriers as being situational, institutional, and dispositional (Hengstler et al, 1984; Claus, 1986; Scanlan & Darkenwald, 1984; Gallay & Hunter, 1979).

As indicated by the above studies, costs associated with attending school are a major situational barrier. Other situational barriers include conflict with home and job responsibilities, child care, and transportation. Institutional barriers include a need for financial aid, access to administrative services, strict entrance requirements, restrictive policies, and perceptions of program benefits. Dispositional barriers reported were fear of rejection, low self-esteem, fear of school itself, lack of interest and commitment, unclear academic goals, and poor former academic achievement. Also, it is indicated that variables such as age, sex, race, and marital status do have an affect upon perception of barriers to education by non-traditional students.

METHODOLOGY

Population and Sample

A sample was drawn from the population of students aged 25 and over attending Carnegie classification Liberal Arts II institutions in the Mid-South. Six institutions were randomly selected and lists of non-traditional students

attending were obtained. Thirty non-traditional students were randomly selected from each of the six institutions.

The Instrument

The questionnaire (See Appendix B) used to gather data in this study was based on a portion of "Learning Interests and Experiences of Adults" used by Carp, Peterson, and Roelfs in their 1972 study. A section of the Carp, Peterson, and Roelfs instrument that examined barriers to learning activities by adults was modified slightly. This section listed 24 previously identified barriers to adult participation and asked respondents to circle those that applied to them. The modified version asked respondents to rate the barrier on a scale of one to five as it was experienced by them. One meant that it was not a concern to them and five meant that it was of overwhelming concern to them. Questions providing the needed demographic information were placed at the end of the questionnaire.

Barriers were categoried using Patricia Cross's categorization of the 24 barriers identified in the Carp, Peterson, and Roelfs (1973) study. This categorization was examined by a panel of experts who either work or participate in the area of non-traditional postsecondary education. The majority agreed with Cross's categorization of all but one barrier. This modification was made for the purpose of analyzing the data in this study.

The questionnaires were mailed to the sample with self-addressed, stamped envelopes for return. Seventy percent of

the sample returned their questinnaires or provided their responses over the telephone within six weeks.

Data Analysis.

To analyze the data gathered in this study, the percentage of respondents reporting each barrier was found, and these were ranked in order from most frequently reported to least frequently reported. A mean score was then found for responses within each of the three barrier categories for age, sex, marital status, number of children, employment status, income, race, age and sex, race and sex, and age, sex, and race. A One-Way Analysis of Variance was performed to determine a significant difference for each barrier category based on marital status, number of children, income, and employment status. A Three-Way Analysis of Variance was performed to determine a significant difference for each barrier category based on age, sex, race, age and sex, age and race, sex and race, as well as age, sex, and race.

A Cronbach's Alpha was performed to determine to what extent observed variances in scores were due to true score variance. A Cronbach's Alpha procedure was chosen because mean scores used were based on a range of values rather than dichotomous answers. The results of Cronbach's Alpha indicated that the scores were highly reliable. The following Alphas were found on subtests for each barrier category: 0.7393 for situational barriers, 0.7776 for the institutional barrier category, and 0.7156 for the

dispositional barrier category. An overall Alpha of 0.865 was found.

RESULTS OF THE STUDY

The results of this study indicated that some variables seem to effect perception of barriers in some barrier categories. In summary, it was found that number of children reported by the respondent had an affect upon their perception of situational barriers, institutional barriers, and dispositional barriers, the employement status of the respondent had an affect upon their perception of institutional barriers, and that the race of the respondent had an affect upon their perception of situational barriers.

Demographics of the Sample

For the purpose of analyzing data, the age variable was grouped by intervals of five years from age 25 through age 45. Those age 46 and over were grouped together from comparision due to their small numbers. The distribution of respondents in respect to age may be seen in Table 1. Of the 118 who responded to this question, 61.8% were age 25 to age 35, while 38.2% were above age 35. The largest percentage of respondents were in the "25 to 30" category. This was 39.8% of the sample. The smallest percentage of respondents were in the "46 and over" category. This was 13.6% of the sample.

The race categories of "White", "Black", "Asian", "Hispanic", and "American Indian" were combined to "White" and "Non-white" because there were no "American Indian", one "Asian", and one "Hispanic". The results may be seen in

Table 2. Of the 119 who responded to this question, 74.8% were "White" and 25.2% were "Non-white".

The results of the sex variable classification may be seen in Table 3. Of the 119 who responded to this question, 63.9% were female and 36.1% were male.

The marital status categories of "divorced", "separated" and "widowed" were combined to become "divorced, separated, or widowed" due to only one respondent in the "widowed" category. The results may be seen in Table 4. Of the 119 who responded to the question, 17.6% were "single", 64.7% were "married", and 17.2% were "divorced, separated, or widowed".

The number of children categories were "None", "One Child", "Two Children", "Three Children", "Four Children", and "Five or More Children". Due to small numbers reported in the "Three Children", "Four Children" and "Five or More Children" categories, these three categories were combined to become "Three or More Children". The results may be seen in Table 5. Of the 119 who responded to this question, 34.5% had no children and 65.5% had one or more children.

The income variable classification was broken down into those earning "$0. to $9,999.", "$10,000. to $19,999.", "$20,000. to $34,999.", and "$35,000. and over". The results may be seen in Table 6. Of the 102 people who responded to this question, the majority of incomes fell into the lower and middle categories. Only 18.7% reported incomes of $35,000. or more.

The employment status variable was broken down into four categories. Category one represented those who were not employed, category two represented those who worked less than one-half-time, category three represented those who worked more than one-half-time but less than full-time, and category four represented those who worked full-time. The results may be seen in Table 7. Of the 117 who responded to this question, 27.4% were not employed and 72.6% were employed to some extent.

Results of Research Question One

Research question one asked: What educational barriers are perceived to exist by non-traditional students at these institutions? To answer this question, Likert type rating scales used to find mean scores for the 24 barriers were recoded to form "yes" and "no" categories. This was done by using 1-not a concern, for the "no" category and 2-a minor concern, 3-an average concern, 4-a major concern, and 5-an overwhelming concern for the "yes" category. This produced percentages of respondents reporting that "Yes this barrier is a problem for me" or "No this barrier is not a problem for me". Table 8 in Appendix A lists the 24 barriers, the percentage reporting "Yes" and "No", the rank order of the barriers, and the barrier classification.

Results of Research Question Two

Research question two asked: Do such factors as marital status, number of children, income, employment status, and race affect non-traditional student perception of categories

of barriers to participation in postsecondary education? The results of this study indicate that some factors do affect non-traditional student perception of barriers to participation in postsecondary education. Examination of data in support of each hypothesis will answer this question. This will be supported by Tables 9 through 26 in Appendix A.

Results of Hypothesis One

Hypothesis one stated: For non-traditional students there are no differences in the perceptions of categories of educational barriers attributable to their age. Mean scores for the situational, institutional, and dispositional barriers with respect to age were not found to be significantly different. Hypothesis one is not rejected for any barrier category (See Tables 9, 10, and 11).

Results of Hypothesis Two

Hypothesis two stated: For non-traditional students there are no differences in the percentages of categories of educational barriers based on sex. Mean scores for the situational, institutional, and dispositional barriers with respect to sex were not found to be significantly different. Hypothesis two is not rejected for any barrier category (See Table 9, 10, and 11).

Results of Hypothesis Three

Hypothesis three stated: For non-traditional students there are no differences in the perceptions of categories of educational barriers based on race. Mean scores for the situational barriers with respect to race were found to be

significantly different. Hypothesis three is rejected for situational barriers (See Table 9).

No follow-up procedure was necessary to identify where the significant differences in perceptions of situational barriers occur for the variable race since there were only two race categories. The difference occurs between "White" and "Non-white" with greater mean scores for "Non-White" students indicating that this category reported more barriers than the "White" category.

Mean scores for the institutional and dispositional barriers with respect to race were not found to be significantly different. Hypothesis three is not rejected for either barrier category (See Tables 10 and 11).

Results of Hypothesis Four

Hypothesis four stated: For non-traditional students there are no differences in the perceptions of categories of eduational barriers based on age, sex, and race. Mean scores for the situational, institutional, and dispositional barriers with respect to the interaction of age and race, age and sex, race and sex, as well as age, sex, and race were not found to be significantly different. Hypothesis four is not rejected for any barrier category (See Tables 9, 10, and 11).

Results of Hypothesis Five

Hypothesis five stated: For non-traditional students there are no differences in the perceptions of categories of eduational barriers based on marital status. Mean scores for the situational, institutional, and dispositional barriers

with respect to marital status were not found to be significantly different. Hypothesis five is not rejected for any barrier category (See Tables 12, 13, and 14).

Results of Hypothesis Six

Hypothesis six stated: For non-traditional students there are no differences in the perceptions of categories of educational barriers based on number of children. Mean scores for the situational barriers with respect to number of children were found to be significantly different. Hypothesis six is rejected for situational barriers (See Table 15).

The Scheffe post-hoc procedure was used to identify where the significant differences in perceptions of situational barriers occur for the variable number of children. This procedure revealed that differences occur between "none" and "two children" (See Table 16).

Mean scores for the institutional barriers with respect to number of children were found to be significantly different. Hypothesis six is rejected for institutional barriers (See Table 17).

The Scheffe post-hoc procedure was used to identify where the significant differences in perceptions of institutional barriers occur for the variable number of children. The conservative Scheffe procedure revealed no significant differences. A Tukey-HSD procedure was done revealing that differences ocur between "none" and "two children" (See Table 18). While Tukey-HSD suggests a

statistical difference, the actual magnitude of the difference between "none" and "two children" is really very slight.

Mean scores for the dispositional barriers with respect to number of children were found to be significantly different. Hypothesis six is rejected for dispositional barriers (See Table 19).

The Scheffe post-hoc procedure was used to identify where the significant differences in perceptions of dispositional barriers occur for the variable number of children. This procedure revealed that differences occur between "none" and "two children", "one child" and "two children", "none" and "three or more children", "one child" and "three or more children", as well as between "two children" and "three or more children" (See Table 20).

Results of Hypothesis Seven

Hypothesis seven stated: For non-traditional students there are no differences in the perceptions of categories of eduational barriers based on income. Mean scores for the situational, institutional, and dispositional barriers with respect to income were not found to be significantly different. Hypothesis seven is not rejected for any barrier category (See Tables 21, 22, and 23).

Results of Hypothesis Eight

Hypothesis eight stated: For non-traditional students there are no differences in the perceptions of categories of educational barriers based on employment status. Mean scores

for the situational and dispositional barriers with respect to employment status were not found to be significantly different. Hypothesis eight is not rejected for either barrier category (See Table 24 and 26).

Mean scores for the institutional barriers with respect to employment status were found to be significantly different. Hypothesis eight is rejected for institutional barriers (See Table 25).

The Scheffe post-hoc procedure was used to identify where the significant differences occur for the variable employment status. The conservative Scheffe procedure revealed no significant differences. A Tukey-HSD procedure was done revealing differences occur between those who were "not employed" and those who were "employed full-time". While Tukey-HSD suggests a statistical difference, the actual magnitude of the difference between "not employed" and "employed full-time" is really very slight.

CONCLUSIONS DRAWN FROM THE STUDY

Conclusion for Research Question One

Research question one asked what educational barriers are perceived by non-traditional students at Carnegie classification Liberal Arts II institutions? This question may be answered in two ways. First, what are the barriers most frequently reported? Second, what categories of barriers are most frequently reported?

The six most frequently reported barriers are in order from most frequently reported to least frequently reported:

1. Not enough time
2. Amount of time required to complete the program
3. Cost
4. Home responsibilities
5. Not enough energy or stamina
6. Job responsibilities

This compares to the orginal Carp, Peterson, and Roelfs (1973) study from which this instrument was adapted, except for one barrier. In the original study, "Not wanting to attend school full-time" was among the six most frequently reported barriers. In this study, "Not wanting to attend school full-time was replaced by "Not enough energy or stamina".

Prior research on barriers indicates that situational barriers are more frequently reported than institutional and dispositional barriers. Based on the results of this study, there is support for this conclusion. Situational barriers were reported to be experienced more frequently than either institutional or dispositional barriers. This is concluded because of the top ten barriers, five were situational, three were institutional, and three were dispositional. This reflects eleven barriers due to a tie for seventh place.

The frequency with which barriers and barrier categories are reported could be affected by the method this study employed to determine "Yes this barrier is a problem for me"

or "No this barrier is not a problem for me". The method employed combined a range of four responses to form the "Yes" category and only one response to form the "No" category. This could increase the likelihood that a respondent would provide a response in the "Yes" category. Therefore, the percentages of "Yes" responses may be inflated.

Conclusion for Research Question Two

Research question number two asked if such factors as age, sex, marital status, number of children, income, employment status, and race affect non-traditional student perception of categories of barriers to participation at Carnegie Classification Liberal Arts II institutions.

Based on the findings of this study, it is concluded that race, number of children, and employment status do significantly affect non-traditional student perception of categories of barriers to participation in postsecondary education. This study concluded the following:

1. When non-traditional students are parents, they report more institutional barriers than students who are not parents.

2. When a non-traditional student is employed full-time, they report more institutional barriers than those employed fewer hours.

3. When a non-traditional student is classified as "Non-white", they report more situational barriers than those classified as "White".

In the Carp, Peterson, and Roelfs (1973) study, it was

concluded that twice as many men as women reported that job responsibilities are barriers, while almost 10 times more women as men reported lack of child care as barriers. Cost was a great barrier for those under age 35. Nearly three-fourths of the women under 35 reported cost, while over one-half the men under 35 also report cost as a barrier. The respondents aged 18-24 more often reported not wanting to return to school full-time and those under age 25 reported past low grades in the past as barriers. Barriers significant to those in the middle age groups included not enough time and home responsibilities. Feelings of being too old and not having enough energy increased with age especially among women (Carp, Peterson, and Roelfs, 1973).

In comparison, this study concluded there is only a small difference in the number of men and women reporting job responsibilities, home responsibilities, and child care problems as a barrier (See Table 28). About 10% more men than women reported job responsibilities as a barrier. About 10% more women than men reported child care as a barrier and 11.5% more women report home responsibilities as a barrier. This is a considerably smaller disparity between men and women than found in the Carp, Peterson, and Roelfs study. This is most likely attributable to the changing roles of women in society and of the changing family structure.

Cost, as in the Carp, Peterson, and Roelfs study, continues to be a large barrier. Thirty percent more men than women reported cost to be a problem. Cost was reported

relatively evenly across all age groups except those age 46 to 50. The 46 to 50 age category reported cost 14% to 27% less often than other categories (See Table 28). For the entire sample, cost was reported by 93.2% of all respondents (See Table 8). It appears that cost is a more universal problem for the current non-traditional student.

Not wanting to attend school full-time and past low grades were not problems particular to younger students as reported in the Carp, Peterson, and Roelfs study. The largest group of those not wanting to attend school full-time are those age 31 to 35. Of this group, only 50% preferred part-time study. Low past grades were not a problem often reported. This problem remained under 50% for the entire sample (See Table 28). In the Carp, Peterson, and Roelfs study, of the youngest category of students, 44% reported not wanting to attend school full-time as compared to 29% to 37% for other age categories. In this same younger category, 24% reported past low grades whereas, only 7% to 16% of the other age categories reported this problem. Those reporting that they did not know what they wanted to study or what further education would lead to was only 32% of the sample (See Table 8). The conclusion drawn from this information, is that the non-traditional student of today is better prepared, is more definite about what training they desire, and is willing to attend school full-time to pursue his or her educational goals.

Conclusion for Hypothesis One

Hypothesis one states: For non-traditional students there is no difference in perception of categories of educational barriers attributable to their age. This hypothesis was not rejected for situational barriers, institutional barriers, and dispositional barriers at the 0.05 level of significance. This indicates that age seems to have no effect upon perception of categories of educational barriers. However, for dispositional barriers the significance of F was 0.052 with the largest cell means belonging to the category "35 to 40". This is not statistically significant, but is close enough to the 0.05 level of significance that age should not be entirely discounted as relevant to the perception of dispositional barriers, especially for those age 35 to 40.

Conclusion for Hypothesis Two

Hypothesis two states: For non-traditional students there is no difference in perception of categories of educational barriers based on sex. This hypothesis was not rejected for situational barriers, institutional barriers, or dispositional barriers at the 0.05 level of significance. This indicates that sex seems to have no effect upon perception of categories of educational barriers.

Conclusion for Hypothesis Three

Hypothesis three states: For non-traditional students there is no difference in perception of categories of educational barriers based on race. This hypothesis was not

rejected for institutional barriers and dispositional barriers at the 0.05 level of significance. Hypothesis seven was rejected for situational barriers at the 0.05 level of significance. For situational barriers there is a significant difference in mean scores between the "white" race category and the "non-white" race category. The mean score for "non-white" category is greater than the mean score for the "White" category. This indicates that those in the "Non-white" category perceive more situational barriers than those in the "White" category.

Conclusion for Hypothesis Four

Hypothesis four states: For non-traditional students there is no difference in perceptions of categories of barriers based on age, sex, and race. This hypothesis was not rejected for situational barriers, institutional barriers, and dispositional barriers at the 0.05 level of significance. This indicates that the interaction of age, sex, and race seems to have no effect upon perception of categories of educational barriers.

Conclusion for Hypothesis Five

Hypothesis five states that for non-traditional students there is no difference in perception of categories of eduational barriers based on marital status. This hypothesis was not rejected for situational barriers, institutional barriers, and dispositional barriers at the 0.05 level of significance. This indicates that marital status seems to

have no affect upon perception of categories of educational barriers.

Conclusion for Hypothesis Six

Hypothesis six states: For non-traditional students there is no difference in perception of categories of eduational barriers based on number of children. Hypothesis six was rejected for situational barriers, institutional barriers, and dispositional barriers at the 0.05 level of significance. For situational barriers, the differences in barrier perception occur between people with "none" and "two children". For institutional barriers, the differences in barrier perception occur between people with "none" and those with "two children". For dispositional barriers, the differences in barrier perception occur between people with "none" and"two children" , "one child" and "two children", "none" and "three or more children", "one child" and "three or more children", and "two children" and "three or more children". This indicates that the more children non-traditional students have, the more likely they are to report situational, institutional, and dispositional barriers.

Conclusion for Hypothesis Seven

Hypothesis seven states: For non-traditional students there is no difference in perception of categories of educational barriers based on income. This hypothesis was not rejected for situational barriers, institutional barriers, and dispositional barriers at the 0.05 level of

significance. This indicates that income seems to have no affect upon perception of categories of educational barriers.

Conclusion for Hypothesis Eight

Hypothesis eight states: For non-traditional students there is no difference in perception of categories of educational barriers based on employment status. This hypothesis was not rejected for situational barriers and dispositional barriers at the 0.05 level of significance. Hypothesis eight was rejected, however, for institutional barriers at the 0.05 level of significance. For institutional barriers, differences in barrier perception occur between people who are not employed and those who are employed full-time. It is, therefore, concluded that those employed full-time are more affected by institutional barriers. For situational barriers the significance of F was 0.055. This is not statistically significant but is close enough to the 0.05 level of significance that employment status also should not be entirely discounted as relevant to the perception of situational barriers. It can be concluded that non-traditional students who are employed full-time will experience more difficulty in surmounting the institutional barriers that those non-traditional students who are not employed to any extent.

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RECOMMENDATIONS BASED ON THIS STUDY

Recommendations for Future Research

This study provides a basis for comparision of further research on the topic of barriers to non-traditional student participation in postsecondary education. A study of these barriers should be conducted for the entire southern region of the United States. The literature indicates that the need exists for the small, private liberal arts college to begin attempts to stabalize enrollment. This is due to predictions of enrollment declines of the 18-24 year-old student population as well as a less secure economic base for this region.

A group of students not surveyed by this or other studies are those who wanted to attend postsecondary institutions but failed to do so. This would include those students who began attending but dropped out and those who considered attendance but were unable to surmount the barriers to begin. These students are difficult to locate, but would provide insight to what real barriers exist preventing participation in postsecondary education by the non-traditional student.

The current list of 24 barriers was representative of the types of barriers found in each category. However, this list was compiled more than 17 years ago. Many societal changes have occurred during these years. A study should consider first what new barriers are being experienced and if the barrier classification method used is still appropriate.

A new psychometric study should not only consider barriers and their classification, but should test these upon current non-traditional students. Students may experience such barriers as a feeling of inadequacy of technological skills or governmental bureaucratic problems dealing with student aid. This could be true of the displaced homemaker with dependent children, the older unemployed worker, or even students dependent upon family or spouse who are unable to qualify for student aid programs but who are unable to pay school costs.

Recommendations for Institutions Interested in Attracting and Retaining Non-Traditional Students

Postsecondary institutions concerned with attracting and retaining the non-traditional student should implement programs designed specifically to assist in surmounting all barriers. Those positions affecting decisions concerning policy and programs for non-traditional students must be sensitive to the needs of these students and constantly aware of the findings of research projects such as this one. People in areas critical to the non-traditional student could include Counselors, Advisors, Admissions Directors, Special Program Directors, Workshop Coordinators, Financial Aid Counselors, Vice-President for Academic Affairs, and any special person designated as a liasion between the administration of the college and the non-traditional student.

Less can be done in surmounting the situational and dispositional barriers but institutional barriers may be virtually eliminated. Based on the findings of this study, the following general recommendations can be made to assist non-traditional students in surmounting the barriers:

1. Not enough time and the amount of time required to complete a program were reported by 94.1% and 93.3% of the non-traditional students in this study respectively as barriers to postsecondary education. Also, more barriers were perceived by students who worked full-time. Removal of these barriers could be aided by programs which could incorporate the student's past experiences and current work requirements into credit-earning programs toward certificates and degrees.

Credit for past experience could be awarded upon satisfactory documentation and demonstration of skills. Special projects could also be incorporated into the student's daily work through more cooperative plans with business and industry. Coordination of paid employment and college credit could not only assist the student in earning certificates and degrees, but also in increasing job performance. Through combining the efforts of work, school, and past experience, students can use their time more efficiently and decrease the time needed to complete a program.

2. Cost is reported as a barrier by 93.2% of the respondents in this study. Financial aid counselors should

be knowledgable about possible sources of funding available to adult students in the form of grants, loans, and scholarships. This information should be available to all non-traditional students and not just those who ask about financial aid. Financial planners should build into the annual budget an allowance for special discounts for non-traditional students. Special incentives such as discounts for additional course work beyond a minimum, special interest-free payment plans, and discounts to spouses or parents of other students could be made available to the non-traditional student. Income should not be a factor in determining eligibility for special incentive programs since income was not found to have a significant effect upon barrier perception.

3. Since institutional barriers are those that college administrators can most effectively remove, attention should be given to them by all who plan policies and programs affecting non-traditional students. Realistic policies should be adopted for admitting and retaining older students.

Admissions requirements should be more liberal for the non-traditional student. Former academic performance has traditionally been used as an indicator of success for students and it has been a large factor in admissions. In dealing with the adult student, past records especially high school grades and previous test scores should not weigh so heavily. Such requirements as letters from former high school counselors are irrelevant. Past records should not be

totally discounted, but contemporary ones should be considered more important.

A stream-lined admissions procedure that could be completed in one brief on-campus visit or over the phone should be implemented. Printed materials concerning admissions and programs should be distributed to people identified as potential students. This study indicated that 39.8% of the respondents felt lack of information was a barrier and that 21.8% of the respondents had problems meeting entrance requirements. The percentages reporting these barriers are small compared to other barriers, but are still large enough to require the attention of administrators.

A non-traditional student's lack of ability to attend classes is reflected in the results of this study. Problems with attendance requirements and classes being scheduled at inconvenient times were both reported by 63.0% of the respondents in this study. These barriers can be reduced by amending attendance requirements for those students who demonstrate that they can maintain acceptable grades and do the work assigned. Classes should be scheduled on a rotational basis and staggered throughout the day and evening. This would more easily accomodate the student's work schedule.

4. It was concluded by this study that more barriers were reported by non-traditional students who have children. Parents could be assisted by having quality low-cost day care

at the institution. This could eliminate the stress of leaving children in uncertain, often expensive day-care facilities located away from where the parent will be attending class. Low-cost, dependable day-care in close proximity would make it possible for parents to come to campus more often, for longer periods of time, and enable them to spend break periods or meal-times together with their children. Fees normally charged to students as an "activity fee" could be earmarked to assist in the operation of day-care programs.

5. It was concluded by this study that more institutional barriers were reported by non-traditional students who are employed full-time. These barriers could be reduced by planning programs and policies to meet their special needs. Class schedules and location, registration times and locations, administrative office hours, counseling and advising hours, flexible attendance rules, and special programs giving credit for life experience are ways to help the working student achieve success in postsecondary education.

6. The results of this study indicate that race affects the perception of situational barriers. The "non-white" respondents reported a significantly greater problem in dealing with problems in their daily lives. A special effort should be made to identify students who might experience problems in the future or who are currently experiencing problems. Counseling should be made available to these

students by specialists experienced in dealing with the special problems of the non-traditional student.

7. The results of this study indicate that sex of the non-traditional student has no effect on perception of either situational barriers, institutional barriers, or dispositional barriers. Therefore, no special policies or programs need to be considered for either sex in admissions requirements, financial aid, day-care availability, or special course offerings.

The following are some general recommendations based on a literature review, some of which are supported by data in this study, and may help non-traditional students in surmounting the barriers:

1. Policies concerning acceptance and subsequent enrollment may be somewhat different but must not sacrifice quality of student. These policies must be such that only qualified, committed students are accepted. Survival of the institution is important, but not at the risk of its reputation.

2. Admission for adult students should be handled in an individualized manner. Special admission status could be provisional and dependent upon acceptable class performance. When test scores are outdated, newer test scores can be useful for class placement and counseling purposes (Erikson, Kimmel, Murphy, & Newcomer, 1976; Bauer, 1988).

3. The procedure for admission may be somewhat modified for adult students. Often it is difficult for a prospective

student to meet time deadlines or normal admissions office hours. Such helpful changes to be made for adults might include mail-in admisssion applications, extended admissions office hours, off-campus admissions counseling services, and deadlines for admission which are closer to or the same as registration times (Eversoll, 1986).

4. In recognition of non-traditional student's multiple committments, a different approach to scheduling should be considered. Scheduling classes should utilize weekend and evening classes as well as special workshops (Gallay & Hunter, 1979). The need for this can be evidenced as reported in this study that 72.6% of the students work, 77% are married, and 66.5% have dependent children.

5. Also to be considered in class scheduling would be coordination of the class times to the community it serves. To meet the needs of the business community, classes during working hours would not be helpful. Classes need to be scheduled before or after work hours or even during scheduled lunch breaks.

6. To meet the needs of the non-traditional student, colleges should go to the community where they live and work. Off-campus locations are an excellent way to reach new students. The time needed to travel can often affect a student's ability to enroll in classes. Classes could meet in businesses through special arangements with employers. An off-campus center with several classes meeting in one

location is often a very cost effective way to offer classes (Byrne & Wolfe, 1986).

7. Week-End or One-Day-A-Week College is an innovative approach to off-campus scheduling. This type of program is arranged so that adults who live too far to commute can take a full-time course load by attending classes during a ten clock-hour day one day each week during the semester. These back-to-back classes can be located in one building in a convenient location with special advisement and support services provided. A program of this nature can be very helpful to full-time workers or mothers of small children (Silling, 1984; Mishler & Moss, 1986).

8. In response to student's needs, some colleges have developed the external degree program. The major characteristics of an external degree program are that there are: (a.) minimal or no residence requirements, (b.) self-paced learning experiences, (c.) student generated programs of study, (d.) assessment procedures for translating career and life experiences into academic credit, and (e.) more flexible response to the transfer of prior college-level credit.

External degrees are granted on the basis of academic work undertaken through independent and flexible studies while performance is evaluated by traditional college-level examinations. The student is afforded the choice of campus involvement or no involvement at all. This is accomplished because the core curriculum offerings are devised for the

student and allow flexibility or completion of courses in other ways at extension centers. The result is a degree that is just like the regular degrees offered at the sponsoring institution. This program can be theoretically and academically sound (Dunn, 1978; Eldred, 1984).

Many innovative ways to help the non-traditional student in pursuit of education have been suggested in the literature. The following seem relevant based on the findings of this study:

1. Special adult association
2. Registration by phone or mail
3. Separate, convenient study area
4. Eligibility for membership in a university credit union
5. Offices open during evening hours
6. Student financial aid programs
7. Faculty members who are oriented toward teaching adults
8. Special information sessions and orientation before enrollment
9. Special on-campus living arrangements such as designated adult areas in dormitories and apartments.
10. Use of technology in alternative delivery systems (Eversoll, 1986; Silling, 1984).

Summary

This study determined the most frequently reported barriers and barrier classifications as well as determing

what factors affect perception of barriers to postsecondary education by non-traditional students. It was concluded that the situational barrier category is the barrier category most frequetly reported by non-traditional students. The ten most frequetly reported barriers from all categories are the following: lack of time, time to complete the program, cost, home responsibilities, not enough energy, job responsibilities, attendance requirements, scheduling problems, tired of studying, and tired of attending school.

From the results of this study, the conclusion was drawn that race affects the perception of situational barriers; number of children affects the perception of situational, institutional and dispositional barriers; and that employment status affects the perception of institutional barriers. The "Non-white" race category reported more situational barriers than the "White" race category. More situational, institutional, and dispositional barriers were reported by non-traditional students who were parents. The intensity of the barriers increased as the number of children increased. Those students who were employed full-time reported more problems in surmounting the institutional barriers than those who were not employed to any extent.

The results of this study indicate that cerain factors do affect non-traditional student perception of barriers to postsecondary education. The situational and dispositional barriers are the most difficult for a post secondary institution to reduce. However, changes can be made to

lessen their impact upon the collegiate career of non-traditional students. The institutional barriers are those most easily reduced by the postsecondary institution. Reduction of these barriers requires a greater understanding of the non-traditional student as well as a strong commitment from the institution.

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Appendix A

Table 1

Number and Percent of Respondents

With Respect to Age

Age Category	Number	Valid Percent
25 to 30	47	39.8
31 to 35	26	22.0
36 to 40	15	12.7
41 to 45	14	11.9
46 and over	16	13.6
Missing information	1	----
Total	119	100.0

Table 2

Number and Percent of Respondents

With Respect to Race

Race	Number	Valid Percent
White	89	74.8
Non-White	30	25.2
Total	119	100.0

Table 3

Number and Percent of Respondents

With Respect to Sex

Sex	Number	Valid Percent
Female	76	63.9
Male	43	36.1
Total	119	100.0

Table 4

Number and Percent of Respondents

With Respect to Marital Status

Marital Status	Number	Valid Percent
Single	21	17.6
Married	77	64.7
Divorced, Separated or Widowed	21	17.6
Total	119	99.9

Table 5

Number and Percent of Respondents

With Respect to Number of Children

Number of Children	Number	Valid Percent
None	41	34.5
One Child	28	23.5
Two Children	24	20.2
Three or More Children	26	21.8
Total	119	100.0

Table 6

Number and Percent of Respondents

With Respect to Income

Income Category	Number	Valid Percent
$0.-$9,999.	28	27.4
$10,000.-$19,999.	29	28.4
$20,000.-$34,999.	26	25.5
$35,000 and over	19	18.7
Missing Information	17	---
Total	119	100.0

Table 7

Number and Percent of Respondents

With Respect to Employment Status

Employment Status	Number	Valid Pecent
Not Employed	32	27.4
Employed 1-19 Hours	19	16.2
Employed 20-39 Hours	27	23.1
Employed 40 Hours and Over	39	33.3
Missing Information	2	---
Total	119	100.0

Table 8

Percentage and Rank Ordering of Respondents Reporting Barriers

Rank Order	"yes"	"no"	Barrier	Barrier Category
1	94.1	5.9	Time	Situational
2	93.3	6.7	Time to complete	Institutional
3	93.2	6.8	Cost	Situational
4	84.0	16.0	Home responsibilities	Situational
5	78.2	21.8	Not enough energy	Dispositional
6	73.1	26.9	Job responsibilities	Situational
7(tie)	63.0	37.0	Attendance requirements	Institutional
7(tie)	63.0	37.0	Scheduling problems	Institutional
8	61.3	38.7	Tired of studying	Dispositional
9	58.0	42.0	Tired of attending	Dispositional

10	51.3	48.7	No place to study	Situational
11	49.6	50.4	Courses not available	Institutional
12	49.2	50.8	Past low grades	Dispositional
13	47.1	52.9	Too much red tape	Institutional
14	43.0	57.0	No way to get credit	Institutional
15	39.8	60.2	Not enough information	Institutional
16	38.7	61.3	Feeling too old	Dispositional
17	36.1	63.9	No childcare	Situational
18	34.7	65.3	Don't want to go full-time	Dispositional
19	34.5	65.5	Afraid to appear too ambitious	Dispositional
20	31.9	68.1	Don't know what to learn	Dispositional
21	26.9	73.1	Family doesn't like	Situational
22	23.5	76.5	No transportation	Situational
23	21.8	78.2	Don't meet requirements	Institutional

Table 9

Three-Way Analysis of Variance of the Situational Barrier Category for the Variables Age, Race, and Sex

Source of Variation	SS	DF	MS	F	Sig of F
Main Effects	4.932	6	.822	1.831	.100
Age	1.670	4	.418	.930	.450
Race	2.210	1	2.210	4.923	.029*
Sex	.084	1	.084	.188	.666
Two-Way Interactions	6.574	9	.730	1.627	.117
Age Race	3.199	4	.800	1.781	.138
Age Sex	1.936	4	.484	1.078	.371
Race Sex	.263	1	.263	.587	.446
Three-Way Interactions	.124	1	.124	.277	.600
Age Race Sex	.124	1	.124	.277	.600
Explained	11.630	16	.727	1.619	.077
Residual	45.344	101	.449		
Total	56.973	117	.487		

* P < .05

Table 10

Three-Way Analysis of Variance of the Institutional Barrier Category for the Variables Age, Race, and Sex

Source of Variation	SS	DF	MS	F	Sig of F
Main Effects	3.349	6	.558	.923	.482
Age	1.778	4	.444	.735	.570
Race	1.465	1	1.465	2.424	.123
Sex	.032	1	.032	.052	.819
Two-Way Interactions	2.620	9	.291	.482	.884
Age Race	1.036	4	.259	.428	.788
Age Sex	.780	4	.195	.322	.862
Race Sex	.646	1	.646	1.069	.304
Three-Way Interactions	1.485	1	1.485	2.456	.120
Age Race Sex	1.485	1	1.485	2.456	.120
Explained	7.454	16	.466	.771	.715
Residual	61.067	101	.605		
Total	68.521	117	.586		

Table 11

Three-Way Analysis of Variance of the Dispositional Barrier Category for the Variables Age, Race, and Sex

Source of Variation	SS	DF	MS	F	Sig of F
Main Effects	4.058	6	.676	1.652	.141
Age	3.991	4	.998	2.437	.052
Race	.060	1	.060	.145	.704
Sex	.028	1	.028	.068	.794
Two-Way Interactions	4.696	9	.522	1.274	.260
Age Race	1.577	4	.394	.963	.431
Age Sex	2.513	4	.628	1.534	.198
Race Sex	.528	1	.528	1.290	.259
Three-Way Interactions	.007	1	.007	.016	.899
Age Race Sex	.007	1	.007	.016	.899
Explained	8.761	16	.548	1.337	.190
Residual	41.354	101	.409		
Total	50.115	117	.428		

Table 12

One-Way Analysis of Variance of the Situational Barrier Category for the Variable Marital Status

Source of Variation	SS	DF	MS	F	Sig of F
Main Effects	1.331	2	.665	1.384	.255
Marital Status	1.331	2	.665	1.384	.255
Explained	1.331	2	.665	1.384	.255
Residual	55.781	116	.481		
Total	57.111	118	.484		

Table 13

One-Way Analysis of Variance of the Institutional Barrier Category for the Variable Marital Status

Source of Variation	SS	DF	MS	F	Sig of F
Main Effects	.294	2	.147	.249	.780
Marital Status	.294	2	.147	.249	.780
Explained	.294	2	.147	.249	.780
Residual	68.432	116	.590		
Total	68.726	118	.582		

Table 14

One-Way Analysis of Variance of the Dispositional Barrier Category for the Variable Marital Status

Source of Variation	SS	DF	MS	F	Sig of F
Main Effects	.595	2	.297	.690	.504
Marital Status	.595	2	.297	.690	.504
Explained	.595	2	.297	.690	.504
Residual	50.12	116	.431		
Total	50.607	118	.429		

Table 15

One-Way Analysis of Variance of The Situational Barrier Category for the Variable Number of Children

Source of Variation	SS	DF	MS	F	Sig of F
Main Effects	9.838	3	3.278	7.973	.000*
Number of Children	9.838	3	3.278	7.973	.000*
Explained	9.838	3	3.278	7.973	.000*
Residual	47.278	115	.411		
Total	57.111	118	.484		

* P < .05

Table 16

Scheffe Post-hoc Procedure to Identify Significant Differences Between Mean Scores for Situational Barriers Based on Number of Children

Number of Children:		0	3+	1	2
Mean					
2.1900	0				
2.5300	3+				
2.5300	1				
2.9900	2	*			

* Denotes pairs of groups significantly different at the 0.05 level.

Table 17

One-Way Analysis of Variance of the Institutional Barrier Category for the Variable Number of Children

Source of Variation	SS	DF	MS	F	Sig of F
Main Effects	5.034	3	1.678	3.030	.032
Number of Children	5.034	3	1.678	3.030	.032
Explained	5.034	3	1.678	3.030	.032
Residual	63.691	115	.554		
Total	68.726	118	.582		

* P < 0.05

Table 18

Tukey-HSD Post-hoc Procedure to Identify Significant Differences Between Mean Scores for Institutional Barriers Based on Number of Children

Number of Children:		0	1	3+	2
Mean	Group				
1.9800	0				
2.0600	1				
2.2900	3+				
2.5200	2	*			

* Denotes pairs of groups significantly different at the 0.05 level.

Table 19

One-Way Analysis of Variance of the Dispositional Barrier Category for the Variable Number of Children

Source of Variation	SS	DF	MS	F	Sig of F
Main Effects	6.076	3	2.025	5.230	.002*
Number of Children	6.076	3	2.025	5.230	.002*
Explained	6.076	3	2.025	5.230	.002*
Residual	44.531	115	.387		
Total	50.607	118	.429		

* P < .05

Table 20

Scheffe Post-hoc Procedure to Determine Siginificant Differences Between Mean Scores for Dispositional Barriers Based on Number of Children

Number of Children:		0	1	2	3+
Mean					
-1.7700	0				
-1.6800	1				
2.2200	2	*	*		
2.8500	3+	*	*	*	

* Denotes pairs of groups significantly different at the 0.05 level.

Table 21

One-Way Analysis of Variance of the Situational Barrier Category for the Variable Income

Source of Variation	SS	DF	MS	F	Sig of F
Main Effects	1.474	3	.491	1.046	.376
Income	1.474	3	.491	1.046	.376
Explained	1.474	3	.491	1.046	.376
Residual	46.021	98	.470		
Total	47.494	101	.470		

Table 22

One-Way Analysis of Variance of the Institutional Barrier Category for the Variable Income

Source of Variation	SS	DF	MS	F	Sig of F
Main Effects	2.365	3	.788	1.362	.259
Income	2.365	3	.788	1.362	.259
Explained	2.365	3	.788	1.362	.259
Residual	56.739	98	.579		
Total	59.104	101	.585		

Table 23

One-Way Analysis of Variance of the Dispositional Barrier Category for the Variable Income

Source of Variation	SS	DF	MS	F	Sig of F
Main Effects	.929	3	.310	.716	.545
Income	.929	3	.310	.716	.545
Residual	.929	3	.310	.716	.545
Explained	42.377	98	.432		
Total	43.306	101	.429		

Table 24

One-Way Analysis of Variance of the Situational Barrier Category for the Variable Employement Status

Source of Variation	SS	DF	MS	F	Sig of F
Main Effects	3.689	3	1.230	2.609	.055
Employment Status	3.689	3	1.230	2.609	.055
Explained	3.689	3	1.230	2.609	.055
Residual	53.268	113	.471		
Total	56.957	116	.491		

Table 25

One-Way Analysis of Variance of the Institutional Barrier Category for the Variable Employment Status

Source of Variation	SS	DF	MS	F	Sig of F
Main Effects	5.333	3	1.778	3.180	.027*
Employment Status	5.333	3	1.778	3.180	.027*
Explained	5.333	3	1.778	3.180	.027*
Residual	63.159	113	.559		
Total	68.491	116	.590		

* P < .05

Table 26

Tukey Post-Hoc Procedure to Determine Significant Differences Between Mean Scores for Institutional Barriers Based on Employment Status

Employment Status:	0	2	1	3
Mean				
1.8566	0			
2.0384	2			
2.2556	1			
2.3498	3		*	

* Denotes pairs of groups significantly different at the 0.05 level.

Table 27

One-Way Analysis of Variance of the Dispositional Barrier for the Variable Employment Status

Source of Variation	SS	DF	MS	F	Sig of F
Main Effects	1.280	3	.427	1.017	.388
Employment Status	1.280	3	.427	1.017	.388
Explained	1.280	3	.427	1.017	.388
Residual	47.372	113	.419		
Total	48.651	116	.419		

APPENDIX B

QUESTIONNAIRE

The following are some problems reported by other adults which might make participation in education difficult. Please indicate the degree of concern that these are for you.

Circle the appropriate level of concern as it applies to you.

1=not a concern 2=a minor concern 3=average concern
4=a major concern 5=overwhelming concern

1.	Cost, including books, learning materials, child care, transportation, as well as tuition	1	2	3	4	5
2.	Not enough time	1	2	3	4	5
3.	Amount of time required to complete the program	1	2	3	4	5
4.	No way to get credit for a degree	1	2	3	4	5
5.	Strict attendance requirements	1	2	3	4	5
6.	Don't know what I'd like to learn or what it would lead to	1	2	3	4	5
7.	No place to study or practice	1	2	3	4	5
8.	No child care	1	2	3	4	5
9.	Courses I want aren't scheduled when I can attend	1	2	3	4	5
10.	Don't want to go to school full-time	1	2	3	4	5
11.	No information about places or people offering what I want	1	2	3	4	5
12.	No transportation	1	2	3	4	5
13.	Too much red tape in getting enrolled	1	2	3	4	5
14.	Hesitate to seem too ambitious	1	2	3	4	5
15.	Friends or family don't like the idea	1	2	3	4	5
16.	Home responsibilities	1	2	3	4	5
17.	Job responsibilities	1	2	3	4	5

18.	Not enough energy and stamina	1	2	3	4	5
19.	Afraid that I'm too old to begin	1	2	3	4	5
20.	Low grades in the past, not confident of my ability	1	2	3	4	5
21.	Don't meet requirements to begin program	1	2	3	4	5
22.	Courses I want don't seem to be available	1	2	3	4	5
23.	Don't enjoy studying	1	2	3	4	5
24.	Tired of going to school, tired of classrooms	1	2	3	4	5

For Use in interpreting your responses, answers to the following questions are necessary.

1. Indicate your sex. _____Female _____Male

2. Your age._____

3. Your race.
   _____White _____Black _____Asian
   _____Hispanic
   _____American Indian

4. What is your marital status?
   _____Single _____Married ___Widowed
   _____Divorced, separated

5. How many children, 17 years or younger, do you have?
   _____0 _____1 _____2 _____3 _____4
   _____5 or more

6. Approximately what was the combined income of you and your spouse (if married) last year (before taxes)?
   _____under $5,000.
   _____$ 5,000. to $ 9,999.
   _____$10,000. to $14,999.
   _____$15,000. to $19,999.
   _____$20,000. to $24,999.
   _____$25,000. to $34,999.
   _____$35,000. to $49,999.
   _____$50,000. and over

7. How many hours per week do you work at a paid job?_____

Participant Code_____ Institution Code_____